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Voice Recognition for FM Repeaters

As an owner of an Apple iPhone 4S, I must say I'm awfully impressed with Siri, the built-in voice-recognition "assistant." Recently I needed to let my doctor know that I was stuck in traffic and was going to be late for my appointment. I didn't have the office number programmed into my phone, but thanks to Siri that wasn't a problem. With a tap of the button, I asked Siri to find his telephone number on the Web and place the call. Within 30 seconds I was talking to the doctor's receptionist!

If Apple can do this with iPhones, why can't we do something similar with FM repeaters? The answer is *we can.*

Steve Lampereur, KB9MWR, points out that version 11 of Google's *Chrome* browser includes support for speech recognition. If one explores the *Chrome* source code, it isn't difficult to uncover how this is implemented. As Steve describes, audio is collected from the microphone, encoded in FLAC format and then passed via an HTTPS POST to a Google Web service. The service quickly responds with a bit of JSON (JavaScript Object Notation) code that can be turned into audible speech. Hams familiar with *Asterisk* have been experimenting with this aspect of the Google Speech system with clever results.

Steve has already set up a speech recognition system on a repeater in Green Bay, Wisconsin. "You ask, 'What time is it?' The repeater recognizes the word 'time,' does a time lookup and then speaks it back," Steve says. "You ask, 'Where is KB8ZXE?' and the repeater recognizes the words 'where' and 'KB8ZXE' and passes a query to APRS.fi and reports back that he was last reported 2.1 miles Northeast of Green Bay."

You can learn more, and hear examples, at **http://kb9mwr.blogspot.com/2012/02/ham-radio-voice-recognition.html**.

A COM Port Too Far

I recently spoke with a ham who was frustrated with a piece of *Windows* software. He wanted to use the software to program his transceiver's memory channels, but the software setup menu needed to know which COM port it should use to communicate with the radio.

Unfortunately, the software had been written back in the days when computers communicated with the outside world through a limited number of serial ports. Today, serial ports have gone the way of the dinosaurs and have been replaced by USB ports. Normally this isn't an issue. If you need a traditional serial connection, you pick up a handy serial-to-USB adapter. When you plug in the adapter, *Windows* creates a *virtual* COM port through which the software can communicate. All is well ... or maybe not.

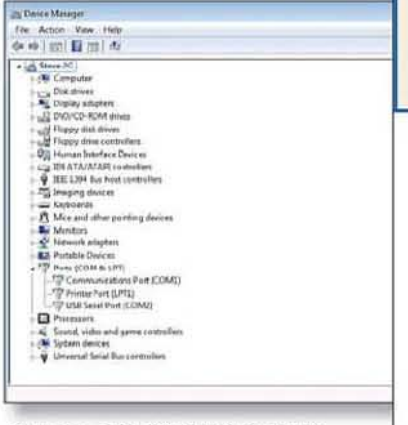

Figure 1 – The list of active ports in *Windows* Device Manager, including a USB Serial Port.

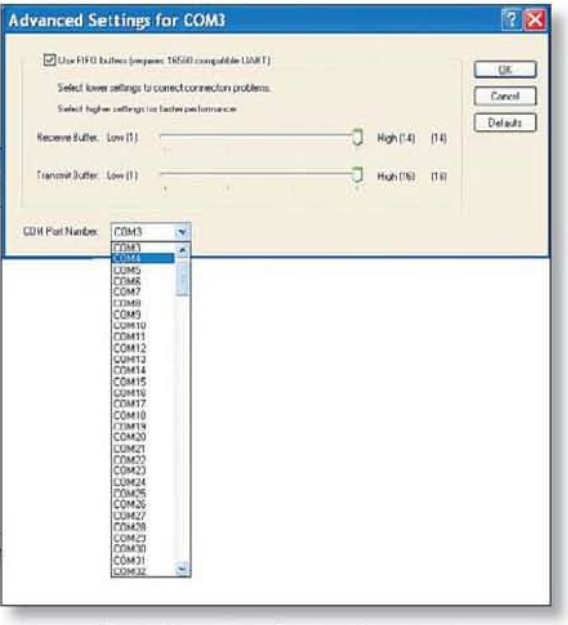

Figure 2 – By clicking on the *Advanced* button under Port Settings you can access the menu that allows you to change the COM port number.

His particular piece of software used a drop-down menu to present the list of COM ports it would recognize. The list consisted of COM 1, COM 2, COM 3 and COM 4. The serial-to-USB adapter, however, was communicating through virtual COM port 11. My friend was out of luck (he used a stronger, unprintable term).

Fortunately, there is a solution.

The first step in the journey is to go to *Windows* Control Panel and find *Device Manager*. In Device Manager, hunt for the word *Ports* in the device list and click the little arrow beside it. See Figure 1 and you'll notice a USB Serial Port, which is already set to COM 2 because, as it turns out, I had a similar software issue on my station PC that I resolved in the same way. For now let's assume the USB Serial Port is COM 11 or something similar.

Double click on the USB Serial Port and then click the *Port Settings* tab. A new window pops open and you'll see a button labeled *Advanced* (don't let that scare you). Click on *Advanced* and you'll be greeted with yet another window (Figure 2). In this window you'll find a drop-down menu that will allow you to renumber the port. If your software needs to "see" COM 4 and you don't see COM 4 elsewhere in the Device Manager Ports list, select COM 4 in the drop-down menu and then click OK (and keep clicking OK all the way back out to Device Manager).

What was once virtual port COM 11 is now virtual port COM 4. Select COM 4 in the software menu and you're all set. (And so was he.)